

Notice of Allowability

Application No.

09/812,065

Examiner

Brian L. Mutschler

Applicant(s)

ROSSIER ET AL.

Art Unit

1753

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to amendment filed 18 October 2004.
2. ☒ The allowed claim(s) is/are 1-3,5-9 and 11-13.
3. ☒ The drawings filed on 19 March 2001 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

REASONS FOR ALLOWANCE

1. The following is an examiner's statement of reasons for allowance:

The instant claims are distinguished over the prior art of record by providing a micro-analytical apparatus and method for mechanically manipulating fluid samples, wherein the samples are mechanically injected by a pinched injection process. Claim 1 requires an apparatus having, *inter alia*, a multi-port valve switchable between two positions. The first position allows mechanical pumping to pinch a sample at the intersection. The second position creates a closed loop of one of the channels to transport the sample within the second channel while maintaining constant pressure in the first channel. Claim 8 recites a method of pinched injection using the apparatus of claim 1. Claim 13 recites an apparatus having a multi-port valve which is the sole actuator controlling the direction of flow of fluid samples and for controlling the directions of flow simultaneously.

The prior art of record discloses apparatus and methods for pinched injection of samples at the intersection of two channels (see US '195, figs. 31A-C). The prior art also teaches the use of mechanical pumping or electrokinetic flow to drive the sample through the channels (see US '817). The use of multi-port valves is also known in the art as a means for injecting samples (see US '952). However, while the elements of the claimed invention are known, the structural relationship recited in the instant claims is neither taught nor suggested by the prior art. The instant claims require a multi-port valve to be used to provide a pinched injection of samples. The combination suggested by the prior art would not be capable of pinched injection because at best, the injection

would be similar to that depicted in Figures 2A-F of US '817, wherein mechanical pumping is used to inject a sample at the intersection. This injection scheme does not provide pinched injection because pressure is only provided at one end of a channel at the time of injection. The prior art does not disclose the formation of a closed loop during the injection process. Furthermore, each of the prior art references cited above requires multiple sources to control the direction of flow, as opposed to the multi-port valve acting as the sole actuator for controlling the direction of flow within the channels. Therefore, the instant claims are distinguished over the prior art of record.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

2. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian L. Mutschler whose telephone number is (571) 272-1341. The examiner can normally be reached on Monday-Friday from 7:30am to 4:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nam Nguyen can be reached on (571) 272-1342. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

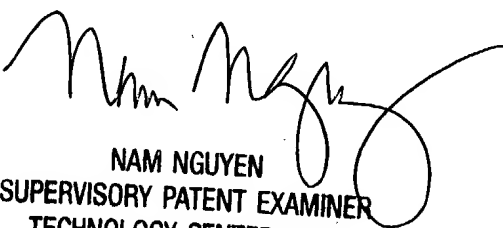
Art Unit: 1753

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



BLM

December 7, 2004



NAM NGUYEN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1700